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All manuscripts must be mailed so as to be in on or before October 1, 1912. They should be sent to the editor of TORREYA,

NORMAN TAYLOR

CENTRAL MUSEUM,
EASTERN PARKWAY,
BROOKLYN, N. Y.

KEY TO THE WILD HERBS FLOWERING IN THE SPRING *

BY CHESTER ARTHUR DARLING

- 1 *a.* Flowers distinctly yellow, not at all red nor merely with a yellow center. . . 2.
- b.* Flowers not yellow. 72.
- 2 *a.* Flowers irregular, one petal modified into a swollen sac 1 in. or more long; leaves several, ovate, with entire margin.
 Yellow Moccasin-flower. (*Cypripedium hirsutum.*)
- b.* Flowers not completely as in *a* 3.
- 3 *a.* Leaves in 1 or 2 whorls on an upright stem; flowers $\frac{1}{2}$ -1 in. broad, curving beneath the upper leaves; styles conspicuous.
 Indian Cucumber-root. (*Medeola virginiana.*)
- b.* Plants not completely as in *a* 4.

* This key is designed as an easy means of determining, in the field, the wild herbs to be found about New York City during the spring months or until June. In using the key it is always desirable to read both *a* and *b* before choosing between them; accuracy in observation and in following the key is of first importance. Additional copies may be had for 10 cents by addressing the author at Columbia University, New York City.

- 4 a. Leaves grass-like; perianth 6-parted, greenish outside. **Star-grass.** (*Hypoxis hirsuta*.)
b. Leaves not grass-like.5.
5 a. Flowers small, usually without stalks, arranged in more or less compact heads.6.
b. Flowers not completely as in a.22.
6 a. Leaves compound with 3 leaflets.7.
b. Leaves not with 3 leaflets; heads of flowers subtended by an involucre of green bracts.10.
7 a. Stipules toothed at the base; seeds black when ripe.
Blackseed Hop Clover. (*Medicago lupulina*.)
b. Stipules not toothed at the base.8.
8 a. Terminal leaflet distinctly stalked.
Low Hop Clover. (*Trifolium procumbens*.)
b. Terminal leaflet not distinctly stalked.9.
9 a. Leaflets $\frac{1}{4}$ – $\frac{1}{2}$ in. long; heads loosely flowered.
Loose-flowered Hop Clover. (*Trifolium dubium*.)
b. Leaflets $\frac{1}{2}$ –1 in. long; heads densely flowered.
Hop Clover. (*Trifolium aureum*.)
10 a. Leaves all basal, deeply lobed; flowering stalk hollow; plant exudes a milky juice when broken.**Dandelion.** (*Taraxacum Taraxacum*.)
b. Plants not completely as in a.11.
11 a. Stem very hairy; leaves bract-like, the large basal leaves wanting at flowering time.**Colt's-foot.** (*Tussilago Farfara*.)
b. Plants not completely as in a.12.
12 a. Plants white-woolly throughout; leaves entire.
Cudweed. (*Gifola germanica*.)
b. Plants not completely as in a.13.
13 a. When open all flowers in the head with irregular, strap-shaped corolla, as in the Dandelion.14.
b. Only outer flowers in the head with an irregular, strap-shaped corolla, the inner ones tubular, as in the Daisy.17.
14 a. Flowering stalk with 1 head.15.
b. Flowering stalk with 2 or more heads.16.
15 a. Basal leaves entire; head 1–2 in. broad. ...**Hawkweed.** (*Hieracium pilosella*.)
b. Basal leaves usually toothed or lobed; heads $\frac{1}{4}$ – $\frac{3}{4}$ in. broad.
Dwarf Dandelion. (*Adopogon carolinianum*.)
16 a. Basal leaves with purplish veins; stem leaves not clasping.
Rattlesnake-weed. (*Hieracium venosum*.)
b. Basal leaves not with purplish veins; stem leaves clasping.
Cynthia. (*Adopogon virginicum*.)
17 a. Heads 2–4 in. broad; plant covered with long hairs throughout; leaves usually entire.**Yellow Daisy.** (*Rudbeckia hirta*.)
b. Plants not completely as in a.18.
18 a. Outer flowers with a brown or purple base; leaves pinnately divided.
Garden Tickseed. (*Coreopsis tinctoria*.)
b. Plants not completely as in a.19.
19 a. Outer flowers with corolla 3–7-lobed at the apex; lower leaves oblong or linear.**Lance-leaved Tickseed.** (*Coreopsis lanceolata*.)

- | | | |
|----|--|---|
| | b. Plants not completely as in <i>a</i> | 20. |
| 20 | <i>a</i> . Basal leaves round-ovate, heart-shaped at base. | |
| | Golden Ragwort. (<i>Senecio aureus</i> .) | |
| | <i>b</i> . Basal leaves tapering at the base into a winged petiole..... | 21. |
| 21 | <i>a</i> . Basal leaves obovate or oblanceolate, rounded at the apex. | |
| | Squaw-weed. (<i>Senecio obovatus</i> .) | |
| | <i>b</i> . Basal leaves usually oblong, rarely oblanceolate, not noticeably rounded at apex..... | Balsam Groundsel. (<i>Senecio Balsamitae</i> .) |
| 22 | <i>a</i> . Flowers irregular..... | 23. |
| | <i>b</i> . Flowers regular..... | 29. |
| 23 | <i>a</i> . Leaves compound; leaflets 6-10, with tendrils. | |
| | Vetchling. (<i>Lathyrus ochroleucus</i> .) | |
| | <i>b</i> . Leaves not completely as in <i>a</i> | 24. |
| 24 | <i>a</i> . Flowers in a terminal spike or raceme..... | 25. |
| | <i>b</i> . Flowers solitary on axillary stalks..... | 27. |
| 25 | <i>a</i> . Leaves entire..... | Chaff-seed. (<i>Schwalbea americana</i> .) |
| | <i>b</i> . Leaves lobed or compound..... | 26. |
| 26 | <i>a</i> . Leaves pinnately parted or lobed... | Wood Betony. (<i>Pedicularis canadensis</i> .) |
| | <i>b</i> . Leaves doubly compound, the leaflets linear. | |
| | Corydalis. (<i>Capnoides flavulum</i> .) | |
| 27 | <i>a</i> . Leaves opposite, linear-lanceolate to ovate. | |
| | Cow-wheat. (<i>Melampyrum lineare</i> .) | |
| | <i>b</i> . Leaves alternate, broadly ovate to heart-shaped..... | 28. |
| 28 | <i>a</i> . Plants hairy; stipules ovate.... | Hairy Yellow Violet. (<i>Viola pubescens</i> .) |
| | <i>b</i> . Plants not hairy; stipules lanceolate. | |
| | Smooth Yellow Violet. (<i>Viola scabriuscula</i> .) | |
| 29 | <i>a</i> . Plant without green leaves or green stem. | |
| | Squawroot. (<i>Conopholis americana</i> .) | |
| | <i>b</i> . Plants with green stem and green leaves..... | 30. |
| 30 | <i>a</i> . Plants growing floating in water..... | 31. |
| | <i>b</i> . Plants not growing in water..... | 32. |
| 31 | <i>a</i> . Leaves rounded, 3 in. or more broad; flowers solitary on the stalk. | |
| | Yellow Pond Lily. (<i>Nymphaea advena</i> .) | |
| | <i>b</i> . Leaves ovate, 5 in. or more long; flowers numerous on a spike. | |
| | Golden Club. (<i>Orontium aquaticum</i> .) | |
| 32 | <i>a</i> . Perianth 6-parted, not differentiated into green calyx and colored corolla; stamens 6; leaves entire..... | 33. |
| | <i>b</i> . Plants not completely as in <i>a</i> | 36. |
| 33 | <i>a</i> . Flowers solitary on the flowering stalk; leaves usually mottled. | |
| | Yellow Adder's-tongue. (<i>Erythronium americanum</i> .) | |
| | <i>b</i> . Plants not completely as in <i>a</i> | 34. |
| 34 | <i>a</i> . Leaves basal; flowers in umbels... | Yellow Clintonia. (<i>Clintonia borealis</i> .) |
| | <i>b</i> . Leaves not basal; flowers solitary or 2 together..... | 35. |
| 35 | <i>a</i> . Leaves with the bases surrounding the stem. | |
| | Perfoliate Bellwort. (<i>Uvularia perfoliata</i> .) | |
| | <i>b</i> . Leaves sessile, not as in <i>a</i> | Bellwort. (<i>Uvularia sessilifolia</i> .) |
| 36 | <i>a</i> . Sepals 4; petals 4; stamens 6..... | 37. |
| | <i>b</i> . Flowers not completely as in <i>a</i> | 43. |

- 37 *a.* Basal leaves with terminal lobe only 1 or 2 times larger than the lateral lobes.....**Yellow Water-cress.** (*Roripa palustris.*)
b. Basal leaves with terminal lobe several times larger than the lateral lobes. 38.
- 38 *a.* Flowers about $\frac{1}{4}$ in. broad, showy and densely clustered at top of spike; leaves dark green, often shining above, not hairy.
Yellow Rocket. (*Barbarea Barbarea.*)
b. Plants not completely as in *a.*.....39.
- 39 *a.* Upper leaves with bases clasping the stem.
Ruta-baga. (*Brassica campestris.*)
b. Upper leaves not as in *a.*.....40.
- 40 *a.* Flowers $\frac{1}{4}$ in. or less broad.....41.
b. Flowers $\frac{1}{2}$ – $\frac{3}{4}$ in. broad.....42.
- 41 *a.* Pods $\frac{1}{2}$ –1 in. long, appressed to the stem.
Hedge Mustard. (*Sisymbrium officinale.*)
b. Pods 2–4 in. long, spreading from the stem.
Tumble Mustard. (*Sisymbrium altissimum.*)
- 42 *a.* Plant only slightly hairy; mature pods 1–2 in. long.
Indian Mustard. (*Brassica juncea.*)
b. Plant covered with stiff hairs; mature pods $\frac{1}{2}$ – $\frac{3}{4}$ in. long.
Wild Mustard. (*Brassica arvensis.*)
- 43 *a.* Ovary inferior.....44.
b. Ovary superior.....48.
- 44 *a.* Petals 4; flowers 1–2 in. broad.....**Sundrop.** (*Kneiffia pumila.*)
b. Petals usually 5; flowers $\frac{1}{4}$ in. or less broad.....45.
- 45 *a.* Leaves simple, linear, arranged in whorls.
Yellow Bedstraw. (*Galium verum.*)
b. Leaves not completely as in *a.*.....46.
- 46 *a.* Fruit or ovary conspicuously winged, not flattened.
Meadow Parsnip. (*Thaspium barbinode.*)
b. Fruit not winged, somewhat flattened.....47.
- 47 *a.* All leaves ternately compound; fruit oblong.
Golden Meadow Parsnip. (*Zizia aurea.*)
b. Basal leaves round-heart-shaped; fruit oval...**Alexanders.** (*Zizia cordata.*)
- 48 *a.* When broken plants exude a yellow juice...**Celandine.** (*Chelidonium majus.*)
b. Plants not completely as in *a.*.....49.
- 49 *a.* Stamens 15 or more.....50.
b. Stamens 10 or less.....66.
- 50 *a.* Perianth not differentiated into green calyx and colored corolla.
Marsh Marigold. (*Caltha palustris.*)
b. Perianth differentiated into a green calyx and colored corolla.....51.
- 51 *a.* Pistils 1–6.....52.
b. Pistils 10 or more.....53.
- 52 *a.* Leaves compound, mostly basal.
Barren Strawberry. (*Waldsteinia fragarioides.*)
b. Leaves simple.....**Frostweed.** (*Helianthemum canadense.*)
- 53 *a.* Calyx with distinct sepals which are readily detached.....54.
b. Calyx more or less united at the base, the lobes not readily detached...61.

54. Flowers about $\frac{1}{2}$ in. broad; petals usually longer than the sepals. 55.
 b. Flowers $\frac{1}{2}$ in. or more broad; petals longer than the sepals. 57.
 55 a. Head of fruit oblong or cylindric; plant stout.
 Ditch Crowfoot. (*Ranunculus scleratus*.)
 b. Head of fruit globose. 56.
 56 a. Basal leaves lobed; achenes with recurved beak.
 Hooked Crowfoot. (*Ranunculus recurvatus*.)
 b. Basal leaves round-heart-shaped, achenes not as in a.
 Kidney-leaved Crowfoot. (*Ranunculus abortivus*.)
 57 a. Plant creeping; leaves often spotted.
 Creeping Buttercup. (*Ranunculus repens*.)
 b. Plants more or less erect. 58.
 58 a. Basal leaves 3-7-divided, the divisions not stalked; plant 2-3 ft. high.
 Meadow Buttercup. (*Ranunculus acris*.)
 b. Basal leaves 3-divided; some of the divisions stalked. 59.
 59 a. Lateral and terminal divisions of leaf stalked; plants only slightly hairy.
 Swamp Buttercup. (*Ranunculus septentrionalis*.)
 b. Only terminal division of leaf stalked; plants hairy. 60.
 60 a. Plant with a bulbous root. **Bulbous Buttercup.** (*Ranunculus bulbosus*.)
 b. Plant with fibrous roots. **Hispid Buttercup.** (*Ranunculus hispidus*.)
 61 a. Leaves pinnately divided; flowers $\frac{1}{2}$ in. or less broad.
 Spring Avens. (*Geum vernum*.)
 b. Leaves palmately divided. 62.
 62 a. Plants erect; leaflets 3, 1-3 in. long.
 Rough Cinquefoil. (*Potentilla monspeliensis*.)
 b. Plants prostrate or ascending. 63.
 63 a. Leaflets 3. **Indian Strawberry.** (*Duchesnea indica*.)
 b. Leaflets usually 5 or more, or a few leaves with 3. 64.
 64 a. Flowers in clusters; leaflets with silvery hairs beneath.
 Silvery Cinquefoil. (*Potentilla argentea*.)
 b. Flowers solitary on a stalk; leaflets not completely as in a. 65.
 65 a. Plant 3-10 in. long; first flower from axil of first stem leaf.
 Dwarf Five-finger. (*Potentilla pumila*.)
 b. Plant $\frac{1}{2}$ -2 ft. long; first flower from axil of second to fourth stem leaf.
 Five-finger. (*Potentilla canadensis*.)
 66 a. Leaves compound with 5 obovate or inversely heart-shaped leaflets. 67.
 b. Leaves not completely as in a. 70.
 67 a. Plant more or less erect, branched above; stalks of flowers erect or spreading.
 Tall Yellow Wood-sorrel. (*Oxalis cymosa*.)
 b. Plants more or less prostrate, branched at the base; stalks of fruit usually reflexed. 68.
 68 a. Flowers $\frac{1}{4}$ - $\frac{1}{2}$ in. broad; capsule $\frac{1}{4}$ - $\frac{1}{2}$ in. long, tapering to apex.
 Procumbent Wood-sorrel. (*Oxalis corniculata*.)
 b. Flowers $\frac{1}{4}$ - $\frac{1}{2}$ in. broad; capsule $\frac{1}{2}$ -1 in. long, short-pointed. 69.
 69 a. Plants with appressed hairs. **Yellow Wood-sorrel.** (*Oxalis stricta*.)
 b. Plants with loose, spreading hairs.
 Slender Wood-sorrel. (*Oxalis Brittoniae*.)
 70 a. Leaves opposite. **Tufted Loose-strife.** (*Naumburgia thyrsiflora*.)
 b. Leaves alternate. 71.

- 71 *a.* Style thread-like, longer than the corolla.

False Gromwell. (*Onosmodium virginianum.*)

- b.* Style not completely as in *a.*

Common Gromwell. (*Lithospermum officinalis.*)

FLOWERS GREENISH OR ELSE WITHOUT A DISTINCT PERIANTH.

- 72 *a.* Flowers green or greenish, or without a distinct perianth.....73.

- b.* Flowers not as in *a.*.....116.

- 73 *a.* Leaves grass-like, linear, usually $\frac{1}{4}$ in. or less broad, 1 in. or more long...74.

- b.* Leaves not completely as in *a.*.....82.

- 74 *a.* Flowers in spikes.....75.

- b.* Flowers in terminal panicles or umbels.....77.

- 75 *a.* Spikes about $\frac{1}{4}$ in. long, solitary at the end of the flowering stalk.

Spike Rush. (*Eleocharis tenuis.*)

- b.* Spikes not completely as in *a.*.....76.

- 76 *a.* Spikes 1-3 in. long, somewhat flattened, the spikelets stalked; leaves fragrant when drying.....**Sweet Vernal Grass.** (*Anthoxanthum odoratum.*)

- b.* Spikes not completely as in *a.*.....**Sedge.** (*Carex.*)

- 77 *a.* Leaves hairy; flowers in terminal umbels.

Wood Rush. (*Juncoides campestre.*)

- b.* Leaves not hairy.....78.

- 78 *a.* Flowers in top-shaped heads arranged in terminal umbels.

Rush. (*Juncus acuminatus.*)

- b.* Flowers not in top-shaped heads, arranged in panicles.....79.

- 79 *a.* Spikelets with hair-like awns about $\frac{1}{2}$ in. long.

Downy Broom-grass. (*Bromus tectorum.*)

- b.* Spikelets of panicle not completely as in *a.*.....80.

- 80 *a.* Outer scale of spikelets shining; grass fragrant.

Holy Grass. (*Savastana odorata.*)

- b.* Outer scales of spikelet not shining; grasses not fragrant.....81.

- 81 *a.* Spikelet 1-flowered, comparatively broad, blunt at apex.

Mountain Rice. (*Oryzopsis asperifolia.*)

- b.* Spikelet 2-6-flowered, tapering to apex; grass common in lawns.

Spear-grass. (*Poa annua.*)

- 82 *a.* Flowers arranged compactly on a spike-like spadix which is surrounded or subtended by a leaf-like bract or spathe.....83.

- b.* Flowers not arranged completely as in *a.*.....86.

- 83 *a.* Plants with a disagreeable, skunk-like odor; bract-like spathe often streaked.

Skunk Cabbage. (*Spathyema foetida.*)

- b.* Plants not with a disagreeable odor.....84.

- 84 *a.* Leaves compound, with 3 leaflets; plant common in woods.

Jack-in-the-Pulpit. (*Arisaema triphyllum.*)

- b.* Leaves simple.....85.

- 85 *a.* Leaves arrow-shaped; leaf-like spathe green, surrounding the flowers.

Arrow Arum. (*Peltandra virginica.*)

- b.* Leaves ovate; leaf-like spathe white, subtending the flowers.

Water Arum. (*Calla palustris.*)

- 86 a. Flowers in a compact spike which appears lateral on a flattened flowering stalk; leaves sword-shaped.....**Sweet Flag.** (*Acorus Calamus.*)
 b. Plants not completely as in a.....87.
- 87 a. Leaves in 1 or 2 whorls on an upright stem; leaves 1-4 in. long, ovate to lanceolate; styles very conspicuous.
Indian Cucumber-root. (*Medeola virginiana.*)
 b. Plants not completely as in a.....88.
- 88 a. Flowers arranged in globose heads $\frac{1}{2}$ in. or more in diameter; leaves linear, usually 1 ft. or more long.....**Bur-reed.** (*Sparganium eurycarpum.*)
 b. Plants not completely as in a.....89.
- 89 a. Leaves all basal; flowers in a terminal spike.....90.
 b. Plants not completely as in a.....93.
- 90 a. Leaves linear, usually 3-ribbed....**Bracted Plantain.** (*Plantago aristata.*)
 b. Leaves oblong, lanceolate, or ovate.....91.
- 91 a. Leaves ovate, often with rounded bases.
Common Plantain. (*Plantago Rugelii.*)
 b. Leaves lanceolate, oblong, or sometimes obovate.....92.
- 92 a. Plant very hairy throughout; leaves obovate to oblong.
Dwarf Plantain. (*Plantago virginica.*)
 b. Plants only slightly hairy; leaves narrowly oblong-lanceolate; plant common.
Rib-grass. (*Plantago lanceolata.*)
- 93 a. Leaves hollow or tubular, pitcher-like, with a terminal lid; plant grows in bogs.....**Pitcher Plant.** (*Sarracenia purpurea.*)
 b. Plants not completely as in a.....94.
- 94 a. Plants prostrate on the ground.....95.
 b. Plants more or less erect.....96.
- 95 a. Leaves ovate or rounded, short-stalked; anthers orange-red; plant in wet places.....**Water Carpet.** (*Chrysosplenium americanum.*)
 b. Leaves awl-shaped, not stalked; plant in dry soil.
German Knot-grass. (*Scleranthus annuus.*)
- 96 a. Flowers $\frac{1}{2}$ - $\frac{3}{4}$ in. broad, irregular, arranged in racemes; leaves basal.
Fen Orchis. (*Leptorchis Loeselii.*)
 b. Plants not completely as in a.....97.
- 97 a. When cut or broken plants exude a milky juice.....98.
 b. Plants without a milky juice.....101.
- 98 a. Leaves 2-4 in. long, 1-3 in. broad; flowers in umbels.
Blunt-leaved Milkweed. (*Asclepias amplexicaulis.*)
 b. Plants not completely as in a.....99.
- 99 a. Leaves linear, numerous.....**Cypress Spurge.** (*Euphorbia Cyparissias.*)
 b. Leaves not linear.....100.
- 100 a. Leaves oblong to ovate, toothed, oblique at base.
Spotted Spurge. (*Euphorbia nutans.*)
 b. Leaves ovate to rounded, entire, not oblique at base.
Wild Ipecac. (*Euphorbia Ipecacuanhae.*)
- 101 a. Leaves compound, the leaflets sometimes stalked.....102.
 b. Leaves simple.....106.
- 102 a. Leaves palmately compound; leaflets 3-11, 1-4 in. long.....103.
 b. Leaves not completely as in a.....104.

- 103 a. Flowers 1-4 in. broad.....**Green Hellebore.** (*Helleborus viridis*.)
 b. Flowers $\frac{1}{2}$ in. or less broad....**Black Snake-root.** (*Sanicula marylandica*.)
- 104 a. Leaflets 2-4 in. long, toothed...**Wild Sarsaparilla.** (*Aralia nudicaulis*.)
 b. Leaflets $\frac{1}{2}$ -2 in. long, somewhat lobed at apex.....105.
- 105 a. Flowers perfect; sepals 6; petals 6; stamens 6.
Blue Cohosh. (*Caulophyllum thalictroides*.)
 b. Flowers imperfect; perianth 4 or 5 parted; stamens numerous.
Early Meadow Rue. (*Thalictrum dioicum*.)
- 106 a. Leaves mostly basal, 4-10 in. long, oblanceolate; flowers arranged in a
 panicle.....**Swamp Saxifrage.** (*Saxifraga pennsylvanica*.)
 b. Plants not completely as in a.....107.
- 107 a. Leaves with toothed, lobed, or wavy margins.....108.
 b. Leaves with entire margins.....110.
- 108 a. Leaves rounded, with 7-9 rounded lobes.
Alum Root. (*Heuchera americana*.)
 b. Leaves not rounded.....109.
- 109 a. Basal leaves with two basal, spreading lobes:
Field Sorrel. (*Rumex Acetosella*.)
 b. Basal leaves not lobed.....**Swamp Dock.** (*Rumex verticillatus*.)
- 110 a. Leaves ovate, 3-12 in. long, not all basal; flowers $\frac{1}{2}$ -1 in. broad, the perianth
 6-parted.....**White Hellebore.** (*Veratrum viride*.)
 b. Plants not completely as in a.....111.
- 111 a. Leaf-like branches narrowly linear, 1 in. or less long; flowers about $\frac{1}{2}$ in.
 long, perianth 6-parted.....**Asparagus.** (*Asparagus officinalis*.)
 b. Plants not completely as in a.....112.
- 112 a. Leaves 3-4, all basal, 4-8 in. long; flowers $\frac{1}{2}$ -1 in. long.
Clintonia. (*Clintonia borealis*.)
 b. Plants not completely as in a.....113.
- 113 a. Plants with tendrils; flowers with bad odor.
Carrion Flower. (*Smilax herbacea*.)
 b. Plants not with tendrils.....114.
- 114 a. Flowers $\frac{3}{4}$ in. or more long; leaves 1-3 in. long.
Bellwort. (*Uvularia sessilifolia*.)
 b. Flowers $\frac{1}{4}$ - $\frac{3}{4}$ in. long; leaves 2-6 in. long.....115.
- 115 a. Leaves hairy beneath, especially on the veins; flowers $\frac{1}{2}$ - $\frac{3}{4}$ in. long.
Hairy Solomon's Seal. (*Salomonias biflora*.)
 b. Leaves not hairy beneath; flowers $\frac{1}{2}$ - $\frac{3}{4}$ in. long.
Smooth Solomon's Seal. (*Salomonias commutata*.)
- FLOWERS NEITHER YELLOW NOR GREEN.
- 116 a. Several small flowers collected into a dense head which is subtended by
 an involucre of bracts, as in the Daisy, not as in Clover.....117.
 b. Flowers not arranged completely as in a.....134.
- 117 a. At least the outer flowers of the head with an irregular or strap-shaped
 corolla.....118.
 b. None of the flowers in the head with a strap-shaped corolla.....124.
- 118 a. Leaves pinnately divided into linear or lanceolate segments.
Corn Camomile. (*Anthemis arvensis*.)
 b. Leaves not completely as in a.....119.

- 119 *a.* Leaves all basal, plant usually cultivated.

Garden Daisy. (*Bellis perennis.*)

- b.* Leaves not all basal. 120.

- 120 *a.* Heads 1-2 in. broad, ray flowers white; leaves often pinnatifid.

White Daisy. (*Chrysanthemum Leucanthemum.*)

- b.* Plants not completely as in *a.* 121.

- 121 *a.* Heads 1-2 in. broad, ray flowers violet or purplish; stem not usually branched above. **Robin's Plantain.** (*Erigeron pulchellus.*)

- b.* Heads usually $\frac{1}{2}$ -1 in. broad; stem usually branched above. 122.

- 122 *a.* Ray flowers rose-purple, 100 or more to each head. *

Philadelphia Fleabane. (*Erigeron philadelphicus.*)

- b.* Ray flowers white or purple tinged, 70 or less to each head. 123.

- 123 *a.* Stem leaves with toothed margins. . . **Sweet Scabious.** (*Erigeron annuus.*)

- b.* Stem leaves with entire margins. . . . **Daisy Fleabane.** (*Erigeron ramosus.*)

- 124 *a.* Leaves with spiny-toothed margins.

Blessed Thistle. (*Cnicus benedictus.*)

- b.* Leaves not with spiny-toothed margins. 125.

- 125 *a.* Leaves all basal, or wanting at flowering time; flowers pink to purple; heads small, in dense racemes. **Butter-bur.** (*Petasites Petasites.*)

- b.* Plants not completely as in *a.* 126.

- 126 *a.* Leaves not white-woolly beneath; plant 1-4 ft. high.

Daisy Fleabane. (*Erigeron ramosus.*)

- b.* Leaves white-woolly beneath. 127.

- 127 *a.* Bracts of the involucre yellow. **Cudweed.** (*Gifola germanica.*)

- b.* Bracts of the involucre not yellow. 128.

- 128 *a.* No conspicuous basal leaves present.

Purple Cudweed. (*Gnaphalium purpureum.*)

- b.* Both basal and stem leaves present; flowers whitish. 129.

- 129 *a.* Basal leaves $\frac{1}{4}$ - $\frac{3}{4}$ in. broad, distinctly 1-nerved. 130.

- b.* Basal leaves $\frac{1}{2}$ -2 in. broad, distinctly 3-5-nerved. 132.

- 130 *a.* Basal leaves $\frac{3}{4}$ -1 in. long, ovate; stolons leafy throughout.

Small Cat's-foot. (*Antennaria neodioica.*)

- b.* Basal leaves 1-3 in. long, oblanceolate. 131.

- 131 *a.* Stolons leafy only toward the tips.

Field Cat's-foot. (*Antennaria neglecta.*)

- b.* Stolons leafy throughout. . . **Canadian Cat's-foot.** (*Antennaria canadensis.*)

- 132 *a.* Plant with purplish, glandular hairs; young leaves usually not hairy above.

Parlin's Cat's-foot. (*Antennaria Parlinii.*)

- b.* Plant not with glandular hairs; young leaves hairy above. 133.

- 133 *a.* Basal leaves 1-3 in. long, with petioles usually shorter than the blades.

Plantain-leaved Everlasting. (*Antennaria plantaginifolia.*)

- b.* Basal leaves 2-5 in. long, with petioles as long as the blade.

Tall Cat's-foot. (*Antennaria fallax.*)

- 134 *a.* Flowers small, arranged compactly on a spike-like spadix which is surrounded or subtended by a leaf-like bract or spathe. 135.

- b.* Flowers not arranged completely as in *a.* 136.

- 135 *a.* Plant with a disagreeable, skunk-like odor; spathe encloses the spadix.

Skunk Cabbage. (*Spathyema foetida.*)

- b. Plants not with a disagreeable odor; spathe only subtending the spadix.
Water Arum. (*Calla palustris*.)
- 136 a. Plant with no part green, parasitic.....137.
 b. Plant with green stem and green leaves.....138.
- 137 a. Plant whitish; flowers solitary.....**Cancer-root.** (*Thalesia uniflora*.)
 b. Plant light-brown; flowers several..**Squaw-root.** (*Conopholis americana*.)
- 138 a. Flowers irregular (*i. e.*, with one petal different from the others).....139.
 b. Flowers regular.....200.
- 139 a. Ovary inferior; leaves with entire margins.....140.
 b. Ovary superior.....142.
- 140 a. Flowers with a large, inflated, pink lip 1 in. or more long; leaves 2, basal.
Moccasin-flower. (*Cypripedium acaule*.)
 b. Flowers rose-purple, not completely as in *a.*.....141.
- 141 a. Leaves ovate, 2-5 in. long; flowers 3-6 together.
Showy Orchis. (*Galeorchis spectabilis*.)
 b. Leaves linear, 3-6 in. long; flowers usually solitary.
- Arethusa.** (*Arethusa bulbosa*.)
- 142 a. Flowers with the petals not united into a tube.....143.
 b. Flowers with the corolla or colored parts of perianth more or less tubular.
 177.
- 143 a. Leaves compound.....144.
 b. Leaves simple.....157.
- 144 a. Leaves palmately compound; leaflets 7-11..**Lupine.** (*Lupinus perennis*.)
 b. Leaves pinnately compound, or with 3 leaflets.....145.
- 145 a. Leaves tendril-bearing at the ends.....146.
 b. Leaves not tendril-bearing at the ends.....151.
- 146 a. Some stipules $\frac{1}{2}$ in. or more long, sharply toothed only at the base....147.
 b. Stipules usually less than $\frac{1}{2}$ in. long, or toothed all around.....150.
- 147 a. Flowers yellow-white.....**Vetchling.** (*Lathyrus ochroleucus*.)
 b. Flowers purplish.....148.
- 148 a. Stipules 1-2 in. long, nearly as large as the leaflets.
Beach Pea. (*Lathyrus maritimus*.)
 b. Stipules $\frac{1}{2}$ -1 in. long, not more than half as long as leaflets.....149.
- 149 a. Stem winged; leaflets lanceolate to linear.
Marsh Vetchling. (*Lathyrus palustris*.)
 b. Stem not winged; leaflets oval to oblong.
- Marsh Pea.** (*Lathyrus myrtifolius*.)
- 150 a. Flowers whitish; stipules linear to lanceolate.
Carolina Vetch. (*Vicia caroliniana*.)
 b. Flowers purplish; stipules triangular-ovate.
- American Vetch.** (*Vicia americana*.)
- 151 a. Leaves doubly compound; flowers in racemes.
Pink Corydalis. (*Capnoides sempervirens*.)
 b. Leaves compound with 3 leaflets; flowers in heads.....152.
- 152 a. Flowers crimson; head oblong, 1-3 in. long.
Crimson Clover. (*Trifolium incarnatum*.)
 b. Flowers red, pink, or white.....153.
- 153 a. Heads oblong, very silky, grayish; plant hairy; flowers whitish.
Rabbit-foot Clover. (*Trifolium arvense*.)

- b. Heads ovoid to globose, not grayish. 154.
- 154 a. Heads ovoid; flowers red to purple; plant somewhat hairy. 155.
b. Heads globose; flowers pink to white; plants not hairy. 156.
- 155 a. Leaflets usually spotted near the middle; leaflets finely toothed.
Red Clover. (*Trifolium pratense*.)
b. Leaflets not spotted; leaflets entire.
Mammoth Clover. (*Trifolium medium*.)
- 156 a. Flowers pink to white; plant not rooting at the nodes.
Alsike Clover. (*Trifolium hybridum*.)
b. Flowers white; plant rooting at the nodes.
White Clover. (*Trifolium repens*.)
- 157 a. Plant 5 ft. or more long, twining.
Dutchman's Pipe. (*Aristolochia macrophylla*.)
b. Plant less than 5 ft. long, not twining. 158.
- 158 a. Flowers without a spur on the petals; leaves clustered near the summit of the stem. **Fringed Milkwort.** (*Polygala paucifolia*.)
b. Flowers with 1 petal spurred or sac-like. 159.
- 159 a. Lower petal somewhat sac-like; flowers about $\frac{1}{4}$ in. long.
Green Violet. (*Cubelium concolor*.)
b. Lower petal spurred; flowers more than $\frac{1}{4}$ in. long. 160.
- BLUE AND WHITE VIOLETS.**
- 160 a. Leaves all basal. 161.
b. Leaves not all basal; flower-stalks from axils of leaves. 173.
- 161 a. Part or all of leaves deeply lobed or cleft, not merely incised at the base. 162.
b. Leaves not deeply lobed or cleft, sometimes incised at the base. 164.
- 162 a. Plant hairy; lobes of leaves toothed or cleft.
Early Blue Violet. (*Viola palmata*.)
b. Plants not noticeably hairy; lobes of leaves linear. 163.
- 163 a. Some petals with coarse hairs on inside.
Coast Violet. (*Viola Brittoniana*.)
b. Petals not with hairs on inside. **Bird's-foot Violet.** (*Viola pedata*.)
- 164 a. Flowers white with purple veins. 165.
b. Flowers some shade of blue or violet. 167.
- 165 a. Leaves broadly heart-shaped or rounded; flowers fragrant.
Sweet White Violet. (*Viola blanda*.)
b. Leaves not as in a; flowers not fragrant. 166.
- 166 a. Leaves ovate to oblong. **Primrose-leaved Violet.** (*Viola primulaefolia*.)
b. Leaves lanceolate. **Lance-leaved Violet.** (*Viola lanceolata*.)
- 167 a. Flowers fragrant; stolons present. **English Violet.** (*Viola odorata*.)
b. Flowers not fragrant; stolons not present. 168.
- 168 a. Leaves heart-shaped, often broader than long, not incised at base. 169.
b. Leaves lanceolate to ovate or arrow-shaped, often incised at the base. 172.
- 169 a. Leaves narrowly heart-shaped; base of blade spreading at right angles to the petiole; white base of flower conspicuous.
Thin-leaved Wood Violet. (*Viola obliqua*.)
b. Leaves heart-shaped to ovate; base of blade somewhat folded or hood-shaped. 170.

- 170 a. Plants growing in wet places and swamps; flowers often darker toward the whiter base.....**Marsh Blue Violet.** (*Viola cucullata*.)
 b. Plants growing in moist woods and meadows, not in swamps.....171.
- 171 a. Flowers deep violet-purple; stalks of flower usually 2 in. or less long.
Early Blue Violet. (*Viola palmata*.)
 b. Flowers violet, not purplish; stalks of flowers 2 in. or more long.
Meadow Blue Violet. (*Viola papilionacea*.)
- 172 a. Plant hairy; leaves rather ovate...**Ovate-leaved Violet.** (*Viola fimbriatula*.)
 b. Plant not hairy; leaves lanceolate to arrow-shaped.
Arrow-leaved Violet. (*Viola sagittata*.)
- 173 a. Flowers usually 1 in. or more broad; plant escaped from cultivation.
Heart's-ease. (*Viola tricolor*.)
 b. Flowers less than 1 in. broad.....174.
- 174 a. Flowers blue or violet; spur elongated.....175.
 b. Flowers whitish or faintly tinged with violet on the outside.....176.
- 175 a. Spur about $\frac{1}{2}$ in. long, as long as the petal.
Long-spurred Violet. (*Viola rostrata*.)
 b. Spur about $\frac{1}{4}$ in. long, half as long as the petal.
American Dog Violet. (*Viola conspersa*.)
- 176 a. Stipules entire.....**Canadian Violet.** (*Viola canadensis*.)
 b. Stipules toothed.....**Striped Violet.** (*Viola striata*.)
- 177 a. Corolla with a spur at the base...**Blue Toadflax.** (*Linaria canadensis*.)
 b. Corolla not with a spur at the base.....178.
- 178 a. All of stem leaves alternate.....179.
 b. Some or all of stem leaves opposite or in whorls.....181.
- 179 a. Bracts subtending the flowers scarlet, very conspicuous.
Scarlet Painted-cup. (*Castilleja coccinea*.)
 b. Bracts subtending the flowers not scarlet.....180.
- 180 a. Leaves pinnately lobed or divided.
Wood Betony. (*Pedicularis canadensis*.)
 b. Leaves not pinnately lobed nor divided.
Chaff-seed. (*Schwalbea americana*.)
181. a. Leaves in a whorl near the summit of the stem.
Fringed Milkwort. (*Polygala paucifolia*.)
 b. Leaves opposite, rarely in whorls.....182.
- 182 a. Calyx with a protuberance on the upper side.
Skullcap. (*Scutellaria pilosa*.)
 b. Calyx not with a protuberance on the upper side.....183.
- 183 a. Flowers solitary or few together in the axils, not in racemes.....184.
 b. Flowers not arranged as in a.....191.
- 184 a. Flowers $\frac{1}{2}$ -1 in. long, usually longer than broad.....185.
 b. Flowers less than $\frac{1}{4}$ in. long, usually as broad as long.....189.
- 185 a. Plants creeping, with rounded or ovate-heart-shaped leaves.....186.
 b. Plants erect or ascending, leaves not rounded.....187.
- 186 a. Upper lip of corolla 2-lobed or notched; calyx about 15-nerved.
Ground Ivy. (*Glechoma hederacea*.)
 b. Upper lip of corolla entire; calyx 5-nerved.
Henbit. (*Lamium amplexicaule*.)

- 187 a. Calyx 4-toothed; stamens 4.....**Cow-wheat.** (*Melampyrum lineare.*)
 b. Calyx 5-lobed or 5-parted; stamens 2.....188.
- 188 a. Flowers whitish; calyx subtended by 2 bractlets.
 Hedge Hyssop. (*Gratiola virginiana.*)
 b. Flowers purplish; calyx not subtended by 2 bractlets.
 False Pimpernel. (*Ilysanthes attenuata.*)
- 189 a. Plant densely hairy; leaves ovate, bluntly toothed or entire.
 Corn Speedwell. (*Veronica arvensis.*)
 b. Plant not densely hairy; leaves oblong to linear, sometimes ovate....190.
- 190 a. Flowers pale blue, arranged raceme-like in the axils of the leaves.
 Thyme-leaved Speedwell. (*Veronica serpyllifolia.*)
 b. Flowers white.....**Purslane Speedwell.** (*Veronica peregrina.*)
- 191 a. Conspicuous, ovate, entire, overlapping bracts subtend each 1-3 flowers;
 spike 1-3 in. long.....**Self-heal.** (*Prunella vulgaris.*)
 b. Bracts subtending the flowers not completely as in a.....192.
- 192 a. Flowers $\frac{3}{4}$ -1 in. long.....193.
 b. Flowers $\frac{1}{2}$ in. or less long.....194.
- 193 a. Stamens 2, the connective elongated and hinged to the filament.
 Lyre-leaved Sage. (*Salvia lyrata.*)
 b. Stamens 4, not hinged as in a.....**Beard-tongue.** (*Pentstemon hirsutus.*)
- 194 a. Stamens 4; flowers in panicles....**Hare Figwort.** (*Scrophularia leporella.*)
 b. Stamens 2; flowers in spikes or racemes.....195.
- 195 a. Flowers $\frac{1}{4}$ - $\frac{1}{2}$ in. long, in dense, long-stalked spikes.
 Water Willow. (*Dianthera americana.*)
 b. Flowers $\frac{1}{4}$ in. or less long.....196.
- 196 a. Racemes terminal; leaves $\frac{1}{4}$ - $\frac{1}{2}$ in. long.
 Thyme-leaved Speedwell. (*Veronica serpyllifolia.*)
 b. Racemes axillary; leaves $\frac{1}{2}$ -4 in. long.....197.
- 197 a. Racemes densely flowered, spike-like; plant 3-10 in. long.
 Common Speedwell. (*Veronica officinalis.*)
 b. Racemes loosely flowered; plant $\frac{1}{2}$ -3 ft. long.....198.
- 198 a. Leaves linear to linear-lanceolate.
 Marsh Speedwell. (*Veronica scutellata.*)
 b. Leaves broadly ovate to lanceolate.....199.
- 199 a. Stem leaves sessile.....**Water Speedwell.** (*Veronica Anagallis-aquatica.*)
 b. Stem leaves petioled.....**American Brooklime.** (*Veronica americana.*)
- 200 a. Leaves linear, thick, with an onion-like odor.
 Meadow Garlic. (*Allium canadense.*)
 b. Leaves not with onion-like odor.....201.
- 201 a. Plants growing submerged in water; leaves linear, $\frac{3}{4}$ in. or less long.
 Ditch Moss. (*Philotria canadensis.*)
 b. Plants not growing submerged in water.....202.
- 202 a. Perianth parts 3 or 6, not joined into a tube; stamens 3 or 6.....203.
 b. Flowers not completely as in a.....217.
- 203 a. Ovary inferior; flowers usually blue.....204.
 b. Ovary superior.....207.
- 204 a. Flowers $\frac{3}{4}$ in. or less broad.....205.
 b. Flowers 1 in. or more broad.....206.

- 205 a. Leaves about $\frac{1}{8}$ in. broad, about $\frac{1}{2}$ the height of the stem.
Pointed Blue-eyed Grass. (*Sisyrinchium angustifolium*).
 b. Leaves about $\frac{1}{4}$ in. broad, nearly as high as the stem.
Blue-eyed Grass. (*Sisyrinchium graminoides*).
 206 a. Leaves $\frac{1}{4}$ – $\frac{1}{2}$ in. broad; outer perianth parts 1–2 in. long.
Slender Blue Flag. (*Iris prismatica*).
 b. Leaves $\frac{1}{2}$ in. or more broad; outer perianth parts 2–3 in. long.
Large Blue Flag. (*Iris versicolor*).
 207 a. Flowers blue, purplish, or rose-colored. 208.
 b. Flowers not colored as in a. 209.
 208 a. Flowers 1–2 in. broad, subtended by leaf-like bracts.
Spiderwort. (*Tradescantia virginiana*).
 b. Flowers $\frac{1}{4}$ – $\frac{1}{2}$ in. broad. **Twisted-stalk.** (*Streptopus roseus*).
 209 a. Flowers about $\frac{1}{4}$ in. or less broad. 210.
 b. Flowers $\frac{1}{2}$ in. or more broad. 213.
 210 a. Both basal and stem leaves present; flowers in wand-like racemes.
Blazing-star. (*Chamaelirium luteum*).
 b. Only stem leaves present. 211.
 211 a. Plant with tendrils, often with prickles. . . . **Greenbrier.** (*Smilax glauca*).
 b. Plants not with tendrils. 212.
 212 a. Leaves not clasping the stem; stamens longer than the perianth.
Wild Spikenard. (*Vagnera racemosa*).
 b. Leaves somewhat clasping the stem; stamens shorter than the perianth.
Star-flowered Spikenard. (*Vagnera stellata*).
 213 a. Leaves 3 in a terminal whorl. 214.
 b. Leaves mostly basal. 216.
 214 a. Flowers purple to pink, with offensive odor.
Ill-scented Wake-robin. (*Trillium erectum*).
 b. Flowers white to pink, not with offensive odor. 215.
 215 a. Stalk of flower recurved, petals recurved, usually pink.
Nodding Wake-robin. (*Trillium cernuum*).
 b. Stalk of flower not recurved; petals usually white.
Large-flowered Wake-robin. (*Trillium grandiflorum*).
 216 a. Leaves lanceolate; flowers solitary.
White Adder's-tongue. (*Erythronium albidum*).
 b. Leaves linear, thick; flowers in umbels; outer side of perianth greenish.
Star-of-Bethlehem. (*Ornithogalum umbellatum*).
 217 a. When cut or broken plants exude a white milky sap. 218.
 b. When cut or broken plants do not exude a milky sap. 221.
 218 a. Flowers with 5 petal-like hoods inside and alternate with the petals. . 219.
 b. Flowers not completely in as a. 220.
 219 a. Some leaves in whorls of 4; flowers whitish.
Four-leaved Milkweed. (*Asclepias quadrifolia*).
 b. Leaves all opposite; flowers purplish.
Blunt-leaved Milkweed. (*Asclepias amplexicaulis*).
 220 a. Leaves 1–2 in. long, oblong to ovate.
Flowering Spurge. (*Euphorbia corollata*).
 b. Leaves 1–5 in. long, linear to lanceolate.
Myrtle Spurge. (*Euphorbia Lathyris*).

- 221 a. Petals or colored parts of the perianth joined into a tube at least at the base.....222.
 b. Petals or perianth parts distinct, not joined into a tube.....263.
- 222 a. Perianth 6-lobed; leaves basal, linear, thick; flowers blue.
Grape Hyacinth. (*Muscari botryoides*.)
 b. Plants not completely as in a.....223.
- 223 a. Leaves clustered in a single whorl at the top of the stem; flowers white.
Star-flower. (*Trientalis americana*.)
 b. Leaves not clustered as in a.....224.
- 224 a. Leaves all basal, with 3 leaflets.....**Buckbean.** (*Menyanthes trifoliata*.)
 b. Leaves not all basal.....225.
- 225 a. Leaves opposite or in whorls on the stem.....226.
 b. All leaves alternate.....241.
- 226 a. Flowers solitary or 2 together in the axils of the leaves.....227.
 b. Flowers not arranged completely as in a.....233.
- 227 a. Flowers 2 together in the axils, their ovaries united; leaves thick.
Partridge Berry. (*Mitchella repens*.)
 b. Plants not completely as in a.....228.
- 228 a. Leaves rounded; flowers purplish close to the ground; roots spicy.
Wild Ginger. (*Asarum reflexum*.)
 b. Plants not completely as in a.....229.
- 229 a. Ovary inferior.....230.
 b. Ovary superior.....231.
- 230 a. Flowers violet or blue; plant 1 ft. high or less.
Bluets. (*Houstonia coerulea*.)
 b. Flowers purplish-brown; plant 2 ft. or more high.
- Horse Gentian.** (*Triosteum aurantiacum*.)
 231 a. Flowers with perianth lobes fringed.....**Mitrewort.** (*Mitella diphylla*.)
 b. Flowers with perianth lobes not fringed.....232.
- 232 a. Flowers $\frac{3}{4}$ in. or more broad, usually blue; leaves thick, evergreen.
Myrtle. (*Vinca minor*.)
 b. Flowers about $\frac{1}{2}$ in. broad, scarlet or white; leaves not evergreen.
- Pimpernel.** (*Anagallis arvensis*.)
 233 a. Ovary inferior.....234.
 b. Ovary superior.....239.
- 234 a. Leaves opposite.....**Long-leaved Houstonia.** (*Houstonia longifolia*.)
 b. Leaves in whorls.....235.
- 235 a. Plants with rough or hairy stems.....236.
 b. Plants with stems smooth, not hairy.....238.
- 236 a. Leaves 6-8 in a whorl, 1-3 in. long, oblanceolate or linear.
Cleavers. (*Galium Aparine*.)
 b. Leaves not completely as in a.....237.
- 237 a. Fruit or ovary hairy; leaves $\frac{1}{2}$ -2 in. long, oval to ovate-lanceolate.
Wild Liquorice. (*Galium circaezans*.)
 b. Fruit or ovary not hairy; leaves $\frac{1}{2}$ - $\frac{3}{4}$ in. long, linear to oblanceolate.
- Clayton's Bedstraw.** (*Galium Claytoni*.)
 238 a. Leaves 6-8 in a whorl.....**Wild Madder.** (*Galium Mollugo*.)
 b. Leaves usually 4 in a whorl.....**Marsh Bedstraw.** (*Galium tinctorium*.)

- 239 a. Corolla tube much shorter than the lobes. **Marsh Pink.** (*Sabbatia campanulata*.)
- b. Corolla tube nearly as long as the lobes. 240.
- 240 a. Plant prostrate; leaves usually $\frac{1}{2}$ in. or less long; plant cultivated in gardens. **Ground Pink.** (*Phlox subulata*.)
- b. Plant erect; leaves 1-3 in. long. **Downy Phlox.** (*Phlox pilosa*.)
- 241 a. Plant creeping, with rounded leaves; perianth 3-lobed, purplish; roots spicy. **Wild Ginger.** (*Asarum reflexum*.)
- b. Plants not completely as in a. 242.
- 242 a. Ovary inferior; leaves rounded, with clasping bases; flowers blue. **Venus' Looking-glass.** (*Specularia perfoliata*.)
- b. Ovary superior. 243.
- 243 a. Flowers about $\frac{1}{2}$ in. or less broad. 244.
- b. Flowers $\frac{1}{2}$ in. or more broad. 255.
- 244 a. Leaves lobed or pinnately compound. **Water-leaf.** (*Hydrophyllum virginicum*.)
- b. Leaves with entire or wavy-toothed margins. 245.
- 245 a. Corolla tube closed by 5 scales attached opposite the corolla lobes. 246.
- b. Corolla tube not completely as in a. 248.
- 246 a. Basal leaves 2-4 in. long or wanting; nutlets erect or incurved. **Stickseed.** (*Lappula Lappula*.)
- b. Basal leaves 5-18 in. long; nutlets spreading. 247.
- 247 a. Flowers reddish-purple to white. **Hound's-tongue.** (*Cynoglossum officinale*.)
- b. Flowers blue. **Wild Comfrey.** (*Cynoglossum virginicum*.)
- 248 a. Style thread-like, much longer than the corolla; corolla lobes erect. **False Gromwell.** (*Onosmodium virginianum*.)
- b. Styles not completely as in a; corolla lobes spreading. 249.
- 249 a. Flowers in racemes. 250.
- b. Flowers in umbels or panicles. 254.
- 250 a. Racemes with numerous leafy bracts; flowers white or yellowish. 251.
- b. Racemes not with numerous leafy bracts; flowers blue or white. 252.
- 251 a. Corolla without scales in the tube; mature nutlets brown, rough. **Corn Gromwell.** (*Lithospermum arvense*.)
- b. Corolla with scales in the tube; mature nutlets white, smooth. **Common Gromwell.** (*Lithospermum officinale*.)
- 252 a. Flowers white; calyx with hooked hairs. **Early Scorpion-grass.** (*Myosotis virginica*.)
- b. Flowers blue; calyx not with hooked hairs. 253.
- 253 a. Calyx lobes much shorter than the calyx tube; plants cultivated and escaped. **Forget-me-not.** (*Myosotis palustris*.)
- b. Calyx lobes as long as the calyx tube; plants not cultivated. **Small Forget-me-not.** (*Myosotis laxa*.)
- 254 a. Flowers in panicles; perianth differentiated into calyx and corolla. **Water Pimpernel.** (*Samolus floribundus*.)
- b. Flowers in umbels; perianth not differentiated. **Bastard Toadflax.** (*Comandra umbellata*.)
- 255 a. Leaves pinnately compound. 256.
- b. Leaves not pinnately compound. 257.

- 256 *a.* Flowers in panicles; stamens alternate with the corolla lobes.
Jacob's Ladder. (*Polemonium Van Bruntiae.*)
b. Flowers not completely as in *a.* **Bittersweet.** (*Solanum Dulcamara.*)
- 257 *a.* Climbing or trailing vines. 258.
b. Erect herbs. 260.
- 258 *a.* Flowers about $\frac{1}{2}$ in. broad, with 2 greenish spots at the base of each corolla lobe. **Bittersweet.** (*Solanum Dulcamara.*)
b. Flowers 1 in. or more broad. 259.
- 259 *a.* Leaves heart-shaped at the base; stigma globose.
Wild Potato Vine. (*Ipomoea pandurata.*)
b. Leaves not heart-shaped at the base; stigma 2-lobed.
Upright Bindweed. (*Convolvulus spithameus.*)
- 260 *a.* Flowers 3-4 in. long, funnel-shaped, usually violet.
Purple Thorn Apple. (*Datura Tatula.*)
b. Flowers 2 in. or less long. 261.
- 261 *a.* Corolla lobes spreading at right angles to the corolla tube, salver-shaped.
Blue Phlox. (*Phlox divaricata.*)
b. Corolla more or less funnel-shaped. 262.
- 262 *a.* Flowers about 1 in. long, blue. **Bluebells.** (*Mertensia virginica.*)
b. Flowers $\frac{1}{2}$ in. or less long, reddish-purple or white.
Hound's-tongue. (*Cynoglossum officinale.*)
- 263 *a.* Two or more petals with a spur at the base. 264.
b. None of the petals with a spur at the base. 265.
- 264 *a.* Five spurs to each flower; flowers reddish.
Wild Columbine. (*Aquilegia canadensis.*)
b. Two spurs to each flower; flowers whitish.
Dutchman's Breeches. (*Bicuculla Cucullaria.*)
- 265 *a.* Leaves simple, with entire or toothed margins, not lobed. 266.
b. Leaves compound, dissected, or lobed. 291.
- 266 *a.* Some or all of the leaves opposite or in whorls on the stem. 267.
b. All leaves alternate or basal. 277.
- 267 *a.* Leaves in a single whorl beneath the single white flower.
Rue Anemone. (*Syndesmon thalictroides.*)
b. Plants not completely as in *a.* 268.
- 268 *a.* Flowers with 2 sepals; leaves usually 2, linear; plants common.
Spring Beauty. (*Claytonia virginica.*)
b. Plants not completely as in *a.* 269.
- 269 *a.* Calyx tubular with 4 or more lobes or teeth; flowers pink.
Wild Pink. (*Silene caroliniana.*)
b. Calyx with separate sepals, or sepals wanting. 270.
- 270 *a.* Petals 5, deeply notched, appearing like 10. 271.
b. Petals 5, not deeply notched. 273.
- 271 *a.* Leaves ovate; styles 3. **Common Chickweed.** (*Alsine media.*)
b. Leaves oblong to linear; styles 5. 272.
- 272 *a.* Stem with sticky hairs; leaves oblong.
Mouse-ear Chickweed. (*Cerastium vulgatum.*)
b. Stem not with sticky hairs; leaves linear.
Field Chickweed. (*Cerastium arvense.*)

- 273 a. Stamens of the same number as the sepals. **Pearlwort.** (*Sagina procumbens.*)
- b. Stamens twice as many as the sepals. 274.
- 274 a. Leaves about $\frac{1}{4}$ in. long, awl-shaped to ovate. 275.
- b. Leaves $\frac{1}{2}$ in. or more long. 276.
- 275 a. Leaves ovate; flowers about $\frac{1}{8}$ in. broad.
- Thyme-leaved Sandwort.** (*Arenaria serpyllifolia.*)
- b. Leaves awl-shaped; flowers about $\frac{1}{2}$ in. broad.
- Pine-barren Sandwort.** (*Arenaria caroliniana.*)
- 276 a. Leaves 1-4 in. long, all basal; plant common.
- Early Saxifrage.** (*Saxifraga virginiensis.*)
- b. Leaves $\frac{1}{2}$ -1 in. long, oval to oblong. **Sandwort.** (*Moehringia lateriflora.*)
- 277 a. Flowers white; perianth not differentiated; leaves 2 or 3.
- False Lily-of-the-Valley.** (*Unifolium canadense.*)
- b. Plants not completely as in a. 278.
- 278 a. Petals 4; sepals 4; stamens usually 6. 279.
- b. Petals 5 or more. 287.
- 279 a. Pods or ovaries usually less than twice as long as broad. 280.
- b. Pods or ovaries elongated, usually more than twice as long as broad. 281.
- 280 a. Flowers purple, about $\frac{3}{4}$ in. broad. **Honesty.** (*Lunaria annua.*)
- b. Flowers white, $\frac{1}{2}$ in. or less broad. **Horse-radish.** (*Roripa Armoracia.*)
- 281 a. Flowers $\frac{3}{4}$ -1 in. broad, purple or white, fragrant.
- Dame's Violet.** (*Hesperis matronalis.*)
- b. Flowers $\frac{1}{2}$ in. or less broad. 282.
- 282 a. Basal leaves usually rounded. **Bulbous Cress.** (*Cardamine bulbosa.*)
- b. Basal leaves not rounded. 283.
- 283 a. Plant usually 1 ft. or more high; stem leaves present. 284.
- b. Plant 1 ft. or less high; stem leaves usually wanting. 286.
- 284 a. Stem leaves not with clasping bases. **Sickle-pod.** (*Arabis canadensis.*)
- b. Stem leaves with clasping bases. 285.
- 285 a. Basal leaves 1-2 in. long; pods erect. **Hairy Rock-cress.** (*Arabis hirsuta.*)
- b. Basal leaves 2-4 in. long; pods recurved.
- Smooth Rock-cress.** (*Arabis laevigata.*)
- 286 a. Basal leaves 1-2 in. long. **Mouse-ear Cress.** (*Stenophragma Thaliana.*)
- b. Basal leaves 1 in. or less long. **Whitlow-grass.** (*Draba verna.*)
- 287 a. Leaves thick and fleshy. **Wild Stonecrop.** (*Sedum ternatum.*)
- b. Leaves not as in a. 288.
- 288 a. Leaves round-heart-shaped. 289.
- b. Leaves obovate to oval. 290.
- 289 a. Plant prostrate; flowers $\frac{1}{4}$ - $\frac{1}{2}$ in. broad.
- Common Mallow.** (*Malva rotundifolia.*)
- b. Plant erect; flowers 1-2 in. broad. **High Mallow.** (*Malva sylvestris.*)
- 290 a. Leaves all basal. **Early Saxifrage.** (*Saxifraga virginiensis.*)
- b. Leaves not all basal. **Pimpernel.** (*Samolus floribundus.*)
- 291 a. Ovary inferior; flowers in umbels; petals 5; stamens 5. 292.
- b. Ovary superior; flowers not completely as in a. 296.
- 292 a. Leaves 3; leaflets 3-5; flowers white, at summit of plant.
- Ground-nut.** (*Panax trifolium.*)
- b. Plants not completely as in a. 293.

- 293 a. Ovary covered with coarse hairs or bristles.....294.
 b. Ovary either smooth or covered with very fine hairs.....295.
- 294 a. Ovary ovoid, covered with hooked bristles.
 Snake-root. (*Sanicula marylandica*.)
 b. Ovary linear, covered with coarse hairs.
 Sweet Cicely. (*Washingtonia Claytoni*.)
- 295 a. Leaves finely dissected into linear segments....**Caraway.** (*Carum Carui*.)
 b. Leaflets ovate, not dissected.....**Chervil.** (*Chaerophyllum procumbens*.)
- 296 a. When broken plants exude a reddish sap; flowers white.
 Blood-root. (*Sanguinaria canadensis*.)
 b. Plants not completely as in a.....297.
- 297 a. Perianth not differentiated into green calyx and colored corolla.....298.
 b. Perianth differentiated.....304.
- 298 a. Flowers reddish, about $\frac{1}{2}$ in. broad; leaves with basal lobes.
 Field Sorrel. (*Rumex Acetosella*.)
 b. Flowers not completely as in a.....299.
- 299 a. Flowers about 2 in. broad, white, borne singly in the axils of the 2 umbrellalike leaves.....**Mandrake.** (*Podophyllum peltatum*.)
 b. Plants not completely as in a.....300.
- 300 a. All leaves basal or wanting at flowering time.....301.
 b. Stem leaves present.....302.
- 301 a. Leaves 3-lobed; flowers subtended by calyx-like involucre.
 Hepatica. (*Hepatica Hepatica*.)
 b. Leaves with 3 leaflets.....**Goldthread.** (*Coptis trifolia*.)
- 302 a. Flowers white in compact or elongated racemes or spikes.
 Baneberry. (*Actaea alba*.)
 b. Flowers solitary on elongated stalks.....303.
- 303 a. Leaflets rounded or oblong, somewhat 3-lobed.
 Rue Anemone. (*Synedemon thalictroides*.)
 b. Leaflets variously toothed, lobed or divided, not with rounded lobes.
 Anemone. (*Anemone quinquefolia*.)
- 304 a. Sepals 4; petals 4.....305.
 b. Sepals 5 or more.....314.
- 305 a. Leaves palmately 3-5-divided; flowers white or pink.....306.
 b. Leaves not palmately divided.....307.
- 306 a. Stem leaves usually 3; leaflets lanceolate.
 Pepper-root. (*Dentaria laciniata*.)
 b. Stem leaves usually 2; leaflets ovate....**Crinkle-root.** (*Dentaria diphylla*.)
- 307 a. Pods or ovaries triangular, notched at apex.
 Shepherd's Purse. (*Bursa Bursa-pastoris*.)
 b. Pods or ovaries not triangular.....308.
- 308 a. Pods or ovaries rounded, much flattened.....309.
 b. Pods or ovaries much longer than broad.....310.
- 309 a. Stem leaves clasping at the base....**Field Cress.** (*Lepidium campestre*.)
 b. Stem leaves not clasping.....**Pepper-grass.** (*Lepidium virginicum*.)
- 310 a. Stem leaves usually entire or slightly tolthed.....311.
 b. Stem leaves usually pinnatifid.....312.
- 311 a. Basal leaves 1-2 in. long....**Lyre-leaved Rock Cress.** (*Arabis lyrata*.)
 b. Basal leaves 3-7 in. long.....**Sickle-pod.** (*Arabis canadensis*.)

- 312 a. Segments of leaves usually oval or obovate; pods spreading.
Wood Bitter-cress. (*Cardamine flexuosa*.)
 b. Segments of leaves usually oblong or linear; pods erect or ascending...313.
- 313 a. Plant branched, about 1 ft. or more high.
Pennsylvania Bitter-cress. (*Cardamine pennsylvanica*.)
 b. Plant not branched, very slender, usually less than 1 ft. high.
Small-flowered Bitter-cress. (*Cardamine parviflora*.)
- 314 a. Calyx lobes 2 or 3; petals 2 or 3; stamens 4-6.
False Mermaid. (*Floerkea proserpinacoides*.)
 b. Flowers not completely as in a.....315.
- 315 a. Stamens 5-10.....316.
 b. Stamens 15 or more.....321.
- 316 a. Petals 6, smaller than the 6 sepals; stamens 6.
Blue Cohosh. (*Caulophyllum thalictroides*.)
 b. Petals 5, larger than the sepals; stamens 5 or 10.....317.
- 317 a. Leaves with 3 inversely-heart-shaped leaflets.
Wood Sorrel. (*Oxalis Acetosella*.)
 b. Leaves not completely as in a.....318.
- 318 a. Flowers 1 in. or more broad, pale purple.
Wild Crane's-bill. (*Geranium maculatum*.)
 b. Flowers $\frac{1}{2}$ in. or less broad.....319.
- 319 a. Flowers pale-pink to whitish, in compact clusters.
Carolina Crane's-bill. (*Geranium carolinianum*.)
 b. Flowers purplish, not in compact clusters.....320.
- 320 a. Flowers about $\frac{1}{2}$ in. broad.....**Herb Robert.** (*Geranium Robertianum*.)
 b. Flowers about $\frac{1}{4}$ in. broad.
- Small-flowered Crane's-bill.** (*Geranium pusillum*.)
- 321 a. Leaves 3-lobed, all basal, sometimes wanting; flowers with 3 sepal-like bracts.....**Hepatica.** (*Hepatica Hepatica*.)
 b. Plants not completely as in a.....322.
- 322 a. Leaves with 3 leaflets; flowers white.....323.
 b. Leaves not with 3 leaflets.....325.
- 323 a. Pistils 5.....**Indian Physic.** (*Porteranthus trifoliatum*.)
 b. Pistils numerous.....324.
- 324 a. Plant growing in the woods; flowering stalk usually longer than the leaves.
Wood Strawberry. (*Fragaria americana*.)
 b. Plant common in fields and waste places; flowering stalk usually shorter than the leaves.....**Wild Strawberry.** (*Fragaria virginiana*.)
- 325 a. Leaves with 5-9 rounded lobes.....326.
 b. Leaves compound with several leaflets.....327.
- 326 a. Leaves mainly basal; flowers white.
False Mitrewort. (*Tiarella cordifolia*.)
 b. Leaves not mainly basal; flowers purplish.
- High Mallow.** (*Malva sylvestris*.)
- 327 a. Flowers purple, $\frac{3}{4}$ -1 in. broad.....**Purple Avens.** (*Geum rivale*.)
 b. Flowers cream-colored, $\frac{1}{4}$ - $\frac{1}{2}$ in. broad.
- Cream-colored Avens.** (*Geum flavum*.)